

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 11-302020

(43) Date of publication of application : 02.11.1999

(51) Int. Cl. C01G 45/12

H01M 4/02

H01M 4/58

H01M 10/40

(21)Application number : 10-144958

(71)Applicant : UBE IND LTD

(22) Date of filing : 20.04.1998

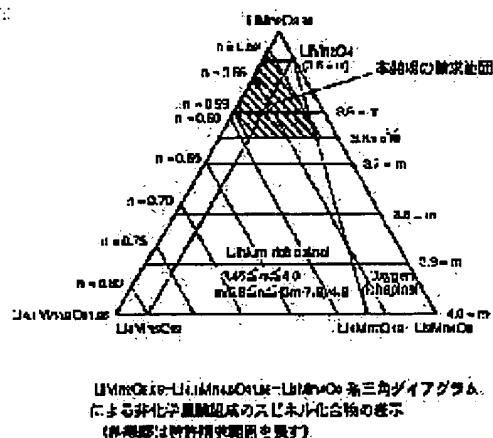
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(54) LITHIUM MANGANESE COMPOUND OXIDE, ITS PRODUCTION AND ITS USE

(57) Abstract:

PROBLEM TO BE SOLVED: To produce a lithium manganese compound oxide for the positive electrode of a lithium cell.

SOLUTION: The lithium manganese compound oxide is a compd. consisting of Li, Mn and O, represented by the formula  $\text{Li}_{1+x}\text{Mn}_{2-y}\text{O}_4$  (where  $-0.01 < x < 0.15$  and  $0 < y < 0.15$ ) and having a cubic spinel structure. The atomic ratio of Li to Mn is 0.52-0.59 and the average oxidation number of Mn is 3.45-3.65. The multiple oxide has 0.821-0.824 nm lattice constant, 60-180 nm crystallite diameter and 1.0-3.7 m<sup>2</sup>/g BET specific surface area, contains at least  $\geq 3\%$  primary particles having  $\geq 1 \mu\text{m}$  particle diameter and has 1.0-15.0  $\mu\text{m}$  median diameter on the particle size distribution curve measured by a laser diffraction scattering method, an aggregation index of 5-20 and  $\geq 55\%$  press molding density.



## LEGAL STATUS

[Date of request for examination] 13.02.2004  
[Date of sending the examiner's decision  
of rejection]  
[Kind of final disposal of application  
other than the examiner's decision of  
rejection or application converted  
registration]  
[Date of final disposal for application]  
[Patent number]  
[Date of registration]  
[Number of appeal against examiner's  
decision of rejection]  
[Date of requesting appeal against  
examiner's decision of rejection]  
[Date of extinction of right]

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